Claims

1. A composition comprising niobium oxide, zirconium oxide and yttrium oxide.

2. The composition according to claim 1 additionally comprising aluminum oxide.

3. The composition according to claim 1 comprising from 60 to 90 % by weight of niobium oxide (calculated in terms of Nb_2O_5) based on the total amount of the composition.

4. The composition according to claim 1 comprising from 5 to 20 % by weight of zirconium oxide (calculated in terms of ZrO_2) based on the total amount of the composition.

5. The composition according to claim 1 comprising from 5 to 35 % by weight of yttrium oxide (calculated in terms of Y_2O_3) based on the total amount of the composition.

6. The composition according to claim 1 comprising from 60 to 90% by weight of niobium oxide (calculated in terms of Nb_2O_5), from 5 to 20% by weight of zirconium oxide (calculated in terms of ZrO_2), and from 5 to 35% by weight of yttrium oxide (calculated in terms of Y_2O_3) based on the total amount of the composition.

7. The composition according to claim 6 additionally comprising aluminum oxide.

8. The composition according to claim 7, wherein the aluminum oxide content (calculated in terms of Al_2O_3) is from 0.3 to 7.5 % by weight of the total of niobium oxide, zirconium oxide and yttrium oxide.

9. A method for forming an antireflection film comprising sintering the composition of any one of claims 1, 6 or 8, vaporizing the resulting oxide, and depositing the vapor on a substrate.

10. The method according to claim 9, wherein the substrate is a plastic substrate.

11. The method according to claim 10, wherein the plastic substrate has one or more coating layers.

12. The method according to claim 10, which is combined with an ion-assisted process.

13. An antireflection film comprising, in an alternating fashion, at least one layer of silicon dioxide and at least one layer obtainable according to the method of claim 9.

14. An antireflection film comprising, in an alternating fashion, at least one layer of silicon dioxide and at least one layer obtainable according to the method of claim 12.

15. An optical element comprising a hard coat layer on a plastic substrate and an antireflection film of claim 13.

16. An optical element comprising a hard coat layer on a plastic substrate and an antireflection film of claim 14.

17. An optical element according to claim 15 selected from a lens for spectacles, lens for a camera, windshield for an automobile, and an optical filter to be fitted to a display of a word processor.